

WHAT IS CLAIMED IS:

1. A removable surface positioning guide for a rotary hand-held tool having a housing and a rotary output, the rotary output adapted to drive a surface engaging bit for engaging a working surface, the removable surface positioning guide comprising:
 - a mounting adapter defining a threaded opening, the threaded opening adapted to screw onto the housing of the rotary hand-held tool, the threaded opening adapted to receive the rotary output therethrough;
 - a guide base adapted to guide the rotary hand-held tool against the working surface, the guide base being carried by the mounting adapter and defining a second opening adapted to receive the surface engaging bit therethrough; and
 - a pivot joint between the guide base and the mounting adapter, the guide base pivoting relative to the mounting adapter about the pivot joint between operable positions, the first and second openings aligning with each other in the operable positions.
2. The removable surface positioning guide of claim 1, further comprising a lock having a locked position locking the guide base relative to the mounting adapter and at a fixed angular position and an unlocked position allowing pivoting movement of the guide base relative to the mounting adapter.
3. The removable surface positioning guide of claim 1, wherein the mounting adapter is made of plastic material, the mounting adapter carrying a plastic pivot body forming part of the pivot joint and supporting the guide base.
4. The removable surface positioning guide of claim 1, wherein the guide base is axially movable relative to the mounting adapter along said tool axis.
5. The removable surface positioning guide of claim 4, wherein the guide base is axially movable between a pair of a stops, further comprising a spring supported by the mounting adapter and biasing the guide base axially away from the mounting adapter, the guide base being movable toward the mounting adapter against the biasing of the at least one spring to effect a plunging movement.
6. The removable surface positioning guide of claim 4, wherein at least one of the stops is adjustable relative to the other stop to adjust travel distance of said plunging movement.

7. The removable surface positioning guide of claim 5, further comprising a pivot body pivotably supporting the guide base and slidably supported on the mounting adapter for linear movement relative to the mounting adapter, the pivot body defining pivot structures for the pivot joint.

8. The removable surface positioning guide of claim 1, wherein the guide base comprises a pair of pillow blocks and a base flange, the flange enclosing the second opening, the pillow blocks supporting the base flange and axially spacing the base flange from the pivot joint.

9. The removable surface positioning guide of claim 8, wherein the base flange includes first and second faces on opposing sides of the base flange, the base flange being reversible relative to the pillow blocks to locate either the first or the second face at a forward end of the removable surface positioning guide for engaging a working surface.

10. The removable surface positioning guide of claim 9, wherein the first face is planar for positioning the guide base against a planar working surface, and the second face includes at least two linearly aligned tabs aligned perpendicular relative to the pivoting movement for guiding the guide base along grooves in the working surface.

11. The removable surface positioning guide of claim 1 further comprising at least one viewing window extending radially through the removable surface positioning guide, the at least one viewing window arranged between the pivot joint and a forward end of the base flange for viewing the surface engaging bit when positioned in the second opening.

12. The removable surface positioning guide of claim 1, further comprising means including a scale and a pointer for indicating an angular position of the guide base relative to the mounting adapter.

13. A removable surface positioning guide for a rotary hand-held tool having a housing and a rotary output, the rotary output adapted to drive a surface engaging bit for engaging a working surface, the removable surface positioning guide comprising:

a mounting adapter defining a threaded opening, the threaded opening adapted to screw onto the housing of the rotary hand-held tool, the threaded opening adapted to receive the rotary output therethrough;

a guide base adapted to guide the rotary hand-held tool against the working surface, the guide base being carried by the mounting adapter and defining a second opening adapted to receive the surface engaging bit therethrough;

at least one spring supported by the mounting adapter and biasing the guide base axially away from the mounting adapter, the guide base being movable toward the mounting adapter against the biasing of the at least one spring to effect a plunging movement;

a first stop arranged to limit how far the guide base is biased away from the mounting adapter; and

a second stop arranged to limit how far the guide base can be moved toward the mounting adapter.

14. The removable surface positioning guide of claim 13, wherein the mounting adapter provides the first and second stops.

15. The removable surface positioning guide of claim 14, further comprising a pivot body slidably supported on the mounting adapter for linear movement relative to the mounting adapter, the pivot body pivotably supporting the guide base wherein the guide base is pivotable relative to the mounting adapter.

16. The removable surface positioning guide of claim 15, further comprising a lock having a locked position locking the guide base relative to the mounting adapter and at a fixed angular position and an unlocked position allowing pivoting movement of the guide base relative to the mounting adapter.

17. The removable surface positioning guide of claim 15, wherein a combination of the pivot body and the mounting adapter define a substantially enclosed spring chamber housing the at least one spring.

18. The removable surface positioning guide of claim 15, wherein the mounting adapter defines a pair of linear guides extending axially, and wherein the pivot body integrally including a pair of linear tracks sliding against the linear guides such that the pivot body is axially movable relative to the mounting adapter.

19. The removable surface positioning guide of claim 14, wherein at least one of the stops is adjustable relative to the other stop to adjust travel distance of said plunging movement.

20. The removable surface positioning guide of claim 19, wherein the adjustable stop includes a threaded bolt threadably mounted into a threaded hole provided by the mounting adapter, the threaded bolt being axially aligned with an abutment surface, rotation of the threaded bolt axially adjusting distance between the abutment surface and the threaded bolt.

21. The removable surface positioning guide of claim 13, wherein the mounting adapter integrally includes an internally threaded sleeve portion concentric about a tool axis adapted to be threadably mounted to the housing of the rotary hand-held tool.

22. The removable surface positioning guide of claim 13, further comprising at least one viewing window extending radially through the removable surface positioning guide, the at least one viewing window arranged between the mounting adapter and a forward end of the base flange for viewing the surface engaging bit when positioned in the second opening.

23. The removable surface positioning guide of claim 13, further comprising means including a scale and a pointer for indicating an axial position of the guide base relative to the mounting adapter.

24. The removable surface positioning guide of claim 13, further comprising a lock having a first position and a second position, the lock in the first position permitting said plunging movement, the lock in the second position locking the mounting adapter to the pivot body at a fixed axial position.

25. A removable surface positioning guide for a rotary hand-held tool having a housing and a rotary output, the rotary output adapted to drive a surface engaging bit for engaging a working surface, the removable surface positioning guide comprising:

a mounting adapter integrally including an internally threaded sleeve portion concentric about a tool axis adapted to be threadably mounted to the housing of the rotary hand-held tool, a pair of linear guides extending axially, and a first stop;

a pivot body integrally including a pair of linear tracks sliding against the linear guides such that the pivot body is axially movable relative to the mounting adapter, the pivot body including a pivot axis perpendicular to the tool axis and a pair of pivot support structures on the pivot axis;

at least one spring supported by the mounting adapter and biasing the pivot body away from the mounting adapter, the first stop engaging the pivot body to limit how far the pivot body is biased away from the mounting adapter;

a pair of pillow blocks integrally providing hinge structures pivotably supported by the pivot support structures; and

a base flange for engaging the working surface, the base flange being supported by the pillow blocks and defining an enclosed opening adapted to receive the surface engaging bit therethrough.

26. The removable surface positioning guide of claim 25, further comprising a first lock having a locked position locking the pillow blocks to the pivot body and at a fixed angular position and an unlocked position permitting pivoting movement of the pillow blocks relative to pivot body.

27. The removable surface positioning guide of claim 26, further comprising having a first position and a second position, the lock in the first position permitting axial plunging movement against the action of the spring between the pivot body and the mounting adapter, the lock in the second position locking the mounting adapter to the pivot body at a fixed axial position.

28. The removable surface positioning guide of claim 25, wherein the mounting adapter includes an adjustable stop including a threaded bolt threadably mounted into a threaded hole provided by the mounting adapter, the threaded bolt being axially aligned with an abutment surface defined by a radially extending tab on the pivot body, rotation of the threaded bolt axially adjusting distance between the abutment surface and the threaded bolt.

29. The removable surface positioning guide of claim 25, wherein the base flange includes first and second faces on opposing sides of the base flange, the base flange being reversible relative to the pillow blocks to locate either the first or the second face at a forward end of the removable surface positioning guide for engaging a working surface.

30. The removable surface positioning guide of claim 29, wherein the first face is planar for positioning the guide base against a planar working surface, and the second face includes at least two linearly aligned tabs aligned perpendicular relative to the pivot

axis, the tabs being configured for guiding the guide base along grooves in the working surface.

31. The removable surface positioning guide of claim 30, wherein the base flange includes a linear guide rail parallel to the pivot axis on a first side of the pivot axis, and a pair of transverse guide rails that are transverse relative to the pivot axis meeting at a corner on a second side of the pivot axis.

32. The removable surface positioning guide of claim 25, further comprising first means including a first scale and a first pointer for indicating an angular position of the guide base relative to the mounting adapter, and second means including a second scale and a second pointer for indicating an axial position of the guide base relative to the mounting adapter.

33. The removable surface positioning guide of claim 25, wherein a combination of the pivot body and the mounting adapter define a substantially enclosed spring chamber housing two springs equally spaced apart.

34. A removable surface positioning guide for a rotary hand-held tool having a housing and a rotary output, the rotary output adapted to drive a surface engaging bit for engaging a working surface, the removable surface positioning guide comprising:

a mounting adapter adapted to be mounted to the housing of the rotary hand-held tool, the mounting adapter defining a first opening adapted to receive the rotary output therethrough;

a guide base carried by the mounting adapter, the guide base including a support member and a base flange, the base flange defining a second opening adapted to receive the surface engaging bit therethrough; the base flange defining first and second faces, the base flange being movable relative to the support member to selectively locate either the first face or the second face at a foremost end of the removable surface positioning guide for engaging the working surface.

35. The removable surface positioning guide of claim 34, wherein the first face is planar for positioning the guide base against a planar working surface, and the second face includes at least two linearly aligned tabs for guiding the guide base along grooves in the working surface.

36. The removable surface positioning guide of claim 35, wherein the base flange includes a linear guide rail on a first side of the base flange, and a pair of transverse guide rails that are transverse relative to the linear guide rail meeting at a corner on a second side of the base flange.

37. The removable surface positioning guide of claim 35, wherein said support member includes two laterally spaced pillow blocks defining mounting slots, and wherein the base flange includes a pair of laterally spaced tabs slidably inserted into the mounting slots retaining the base flange to the pillow blocks.

38. The removable surface positioning guide of claim 35, wherein the base flange is removable, further comprising a second base flange mountable to the support member whereby the second base flange is interchangeable with said base flange.

39. The removable surface positioning guide of claim 35, further comprising means for facilitating axially plunging movement between the guide base and the mounting adapter.

40. The removable surface positioning guide of claim 35, further comprising means for facilitating pivoting movement between the guide base and the mounting adapter.